

**Horton H. Hobbs, Jr. (29 March 1914–22 March 1994).
Biographical notes**

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Abstract.—The 211 papers and abstracts published by the late Horton H. Hobbs, Jr., are cited and annotated by a list of new taxa published in each paper. An alphabetical list of taxa named by Hobbs is provided; the repository and the catalogue number are cited for each holotype. Hobbs's reminiscences of his introduction to crayfishes and his early work are summarized from an oral interview.

To many who knew him and his work, the name Horton H. Hobbs, Jr. (Figs. 1, 2) is synonymous with freshwater crayfishes of North America. Indeed, to many he was known affectionately as "crawdaddy." The enormous advances in our understanding of the systematics, distribution, and evolution of crayfishes that resulted from his studies in a career spanning six decades are well known to all astacologists. Perhaps less known are his contributions on other groups, including freshwater and cave shrimps and crabs, and ostracod associates of crayfishes.

Hobbs's studies resulted in the recognition of many new taxa: 1 new family (Cambaridae); 38 new genera and subgenera (1 genus of palaemonid shrimp, *Neopalaeomon*; 8 genera of entocytherid ostracods; and 29 genera and subgenera of North American crayfishes); and 286 species (168 crayfishes, 104 entocytherids, 8 caridean shrimps, and 6 freshwater crabs).

A remarkable number of Hobbs's contributions are monographs or other book-length works on a wide variety of topics:

1942d, crayfishes of Florida, 179 pp.;

1964a, Hobbs & Villalobos, crayfishes of Cuba, 59 pp.;

1969a, Chace & Hobbs, freshwater and terrestrial decapods of the West Indies, 258 pp.;

1971b, entocytherid ostracods of Mexico and Cuba, 55 pp.;

1972a, subgenera of *Procambarus*, 22 pp.;

1972g, crayfishes of North and Middle America, 173 pp.;

1974c, checklist of North and Middle American crayfishes, 161 pp.;

1977b, Hobbs & Peters, entocytherid ostracods of North Carolina, 73 pp.;

1977c, Hobbs, Hobbs III, & Daniel, troglolitic decapods of the Americas, 183 pp.;

1981b, crayfishes of Georgia, 549 pp.;

1982e, Hobbs & Hart, revision of *Atya*, 143 pp.;

1986a, Andolshek & Hobbs, entocytherid ostracods of Georgia, 43 pp.;

1987b, revision of *Astacoides*, 50 pp.;

1989g, illustrated checklist of American crayfishes, 236 pp.

Hobbs's productivity led a European student to remark to one of us (R.B.M.) "Oh, Hobbs. He writes faster than I can read."

Hobbs III recalls (in litt.) that during the late 1930s, Hobbs's father held him by his ankles while Hobbs slithered into a vertical crack (River Bed Cave, Columbia County, Florida) to collect *Procambarus (O.) pallidus*—he then pulled him back out (for other anecdotes by and about Hobbs, see Hobbs 1986d).



Fig. 1. Hobbs collecting after the 1967 meeting of the Association of Southeastern Biologists, Columbia, South Carolina (J. F. Fitzpatrick, Jr. and Hobbs III).

J. F. Fitzpatrick, Jr. (in litt.), provided two other anecdotes. "One day, in the '60s, I think—Hobbs had stopped by to see Miss Peggy on some business while he was en

route on some field excursion. Because he was in motion, he did not call or write ahead to announce his arrival. When he knocked on the door in the middle of the

day in an active residential neighborhood of a small Virginia city, he found Miss Peggy home alone. The entire conversation, not short, was conducted with him standing on the porch and she behind the cracked door with the chain engaged. To her, 'It just wouldn't be proper to have a man in the house with Miss Lucille away on an errand', even such a true gentleman of long acquaintance as was Hobbs. He delighted in relating this story to those who knew her as an example of her propriety, but he never faulted her behavior; he only respected it in his amusement."

"The other goes back to his graduate student days at Gainesville and reveals a side of his character that only those of us who knew him well knew. He and Archie Carr were classmates and shared an office with a few others. Despite the reticence of his later years, a youthful Archie apparently was animated and outspoken. He had a habit during repeated discussions of rearing back on the hind legs of his wooden chair, and when he made an emphatic point, he would slam the front legs on the floor. The mischievous crew connived to play a trick on Archie with Hobbs surely one of the conspirators if not the actual perpetrator. They got a couple of fireworks 'torpedoes' and clandestinely attached them to the front legs of Archie's chair. When he came in, they led him into a topic to which they knew he would react strongly. True to form, he reared his chair and at an appropriate point slammed the front legs. Archie was attached to the ceiling by his nails as the others rolled on the floor in merriment. Despite this treatment, the group remained friends for their whole lives."

All of us who knew and worked with Horton have many fond remembrances of him. He was the quintessential southern gentleman, always rising when a woman entered his presence. It pained him not to be able to open doors for women, and his female car-poolers were trained to wait at a door if he fell behind them. Elizabeth Nelson remembers that in his last years, in frail

condition and walking precariously with a cane, he rushed to open a door for her as she walked by with a small package. She knew that to refuse his offer of assistance would have pained him terribly.

Elizabeth also remembered his expression, a mixture of embarrassment and delight, when he was presented with a pair of boxer shorts with two flies at his retirement party—the idea being that having studied entocytherid ostracods so long he might have developed hemipenes.

Brian Kensley joined Horton on one of his last field trips. "In the fall of 1987, I accompanied Horton on a field trip to eastern Texas. He wanted to complete a survey of the crayfishes of this area, and also gather some data on *Fallicambarus devastator* Hobbs & Whiteman, 1987c, the burrowing crayfish that causes much destruction to fields and lawns. We drove in Horton's car. He would set the speed control, and discourse on the flora and geology of the area we were driving through. Every now and then we would have to stop, so that he could push a net through a puddle next to the road, or to show me a tree with which I was unfamiliar. Between whiles, he recounted incidents from his early days of field collecting and teaching. It was for me a natural history revelation. Arrived in Texas, we met with farmers and agricultural extension officers to gather information on *devastator*, and to dig in the bone-dry, concrete-hard fields dotted with chimneys. This was my primary role. Once I had got down to the water table, Horton would lie stretched out on the ground, one arm reaching 2–3 feet down into the hole for the couple of crayfish at the bottom. We also did a lot of (much easier) digging in stream banks, and this is where I uncovered specimens of a beautiful spotted crayfish which he eventually named for me [*Procambarus (Girardiella) kensleyi* Hobbs, 1990a]. Hunting season opened while we were in the Neches River area. On the third occasion while we were either walking through the woods, or working at a stream bank, and a



rifle shot rang out nearby, Horton turned to me (I was distinctly edgy at this point) and said: 'Let's go home', which we did, all the way back to northern Virginia, at the sedate speed limit while I absorbed yet more landscape science."

Horton thoroughly enjoyed his martini at cocktail hour (see Fig. 3, showing Horton on his boat, the martini barge, on Lake Barcroft). While one of us (R.B.M.) was living in Tunisia, Horton graciously shared his home with me. On one of my trips back, I noticed that Horton was having a clear cocktail in a 12 oz. glass rather than in his normal martini glass. This appeared strange to me, but I didn't comment on the large drink, assuming that Horton's affinity for martinis had expanded exponentially. Someone told him of my concern, and he had many laughs from the occasion, as he had shifted from martinis to a gin and tonic, with lots of ice, for the summer. I suspect that I took Horton his last martini during his last stay in the hospital. It was in a glass jar, which he gleefully accepted and hid in a drawer so that he could have it at happy hour. Later that day, his daughter Nina visited him, and Horton told her "look what I have." She smelled the jar and asked where he got it, probably knowing full well that I was involved.

Aspects of Hobbs's life and career have been summarized in other obituaries by Fitzpatrick (1995a, 1995b, 1996) and Hoffman (1994). Hobbs's southern manners were characteristic of him. One aspect of his life that was known to those who shared dinner as his guest was his interest (and ability) in baking and cooking. Alan Davidson (1979:432) in *North Atlantic Seafood* published his recipe for hush puppies. Da-

vidson referred to him as "The scholarly Mr Hobbs."

Cooper & Cooper (1997:616) acknowledged Hobbs's influence: "As always, we are immensely grateful to the late Horton H. Hobbs, Jr., for the splendid lessons he taught (not all of them about decapods)."

Only his colleagues in the Department of Invertebrate Zoology at the National Museum of Natural History are aware of one highlight of Hobbs's career. In 1976 Thomas E. Bowman and Louis S. Kornicker, members of the department's self-appointed SOL Awards Committee, awarded him the "Smithsonian Order of the Lobster." The award celebrates an accomplishment or achievement of outstanding insignificance, something that usually is quite difficult to associate with Hobbs. The award was based on the following series of misadventures.

Hobbs and colleagues C. W. Hart, Jr. and Margaret Walton introduced four new names for the entocytherid ostracod, *Donnaldsoncythere donnaldsonnensis* (Klie, 1931) (see Hobbs & Peters 1977:43, 44 for a synonymy), already burdened by two synonyms, *Entocythere humesi* Hoff, 1943 and *E. pennsylvanica* Hart, 1960, as well as four unavailable names published as erroneous spellings: *E. donnaldsoni* Wolf, 1934–1938; *E. donalsonensis* Rioja, 1943; and *E. donaldsonensis* Tressler, 1947. Hobbs & Walton (1961a) named *E. hiwasseeensis* from Georgia; Hart & Hobbs (1961b) named *E. tuberosa* from Tennessee (with the erroneous spelling *tuberculata* in the same paper); Hobbs & Walton (1963b) named *Donnaldsoncythere scalis* from Virginia and *D. ileata* from Virginia.

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Fig. 2. United States crawfish workers, meeting of Association of Southeastern Biologists, Memphis, Tennessee, 19 April 1969 (includes all significant workers with crayfishes and their associated biota, except for Perry C. Holt, who worked on branchiobdellids). From left to right, C. W. Hart, Jr., J. F. Fitzpatrick, Jr., Glen Gentry, Rudolph Prins, Daniel J. Peters, James F. Payne, Raymond W. Bouchard, Jean E. Pugh, Horton H. Hobbs III, Horton H. Hobbs, Jr., Marilyn Black, Martha Reiser Cooper, Joe B. Black, and John E. Cooper (J. F. Fitzpatrick, Jr., R. Prins, and Hobbs III).



Fig. 3. Horton H. Hobbs, Jr. Clockwise, from upper left: Enjoying a crayfish, 1969 (Hobbs III); Gainesville days, undated (Hobbs III); in the field, undated (Hobbs III); on the martini barge with Manning, undated (Daniel J. Peters); in the field, 4 July 1980, photo by Jean Dubois, Belgium (Daniel J. Peters).

Biographical Notes

Here we reproduce part of an Oral History Interview of Hobbs by Pamela M. Henson, Smithsonian Institution Archives, in July 1976. It and the rest of the interview, largely dealing with aspects of his career after he left the University of Florida to go to the University of Virginia in 1946, form Record Unit 9509 in the Smithsonian Institution Archives. The questions are by Henson, the answers by Hobbs.

Question: As we discussed, we can start with some biographical information about you and your education, and how you came to be interested in Crustacea.

Answer: My undergraduate, well, all of my work was done at the University of Florida. It was during the depression years, so when I received my Bachelor's degree I was able to get an assistantship in the department and took my Master's. There was no place to go, so I stayed on and joined the faculty after I took my Master's, teaching the introductory courses in biology. I stayed on for my doctorate; and it took me several years because of residence requirements and working full time, so I got my degree in 1940. I spent one summer at the Mountain Lake Biological Station during that time, doing work with Dr. [Chauncy M.] Gilbert, a course in arthropods.

You asked about my interest in crayfishes. This began when I was a freshman in college. We came to the laboratory exercise dealing with the crayfish; the first day it was external anatomy—had no difficulty whatsoever, everything was beautiful. The second day had to do with internal structures, and the crayfish that I was given apparently had demised with the flood, because it was complete soup inside. So I suppose I was an eager beaver, in part, and I knew that not far from the boarding house where I was living at the time there was a little creek. I went down after school that afternoon and I caught a few crayfishes and brought them back to the room. That evening I made my dissection and everything

was as it should be, but I had some crayfish left over and I couldn't see killing them. So I found a jar to put them in (I planned to take them back to the creek the next evening) and put them on my desk where I was studying. In a few minutes I noticed a commotion, and a male and female had gotten together. I watched them for a while, and I said, "Well, maybe I'll get eggs in a few days." And sure enough, within two weeks, eggs were there. About three weeks later the female was carrying the young, and the more I watched them the more interested I became. By the end of that semester, I went to the chairman of the department and told him that I'd become interested in crayfishes and would like to do some work with them. He said, "Well, I know nothing about them but I'll be happy to help you in any way that I can." So that's the way it began, and since 1931, I've looked at not much else.

Question: That is interesting. And I suppose your room turned into a big aquarium?

Answer: No, not really. But strangely enough, I was never able after that time to rear a clutch of eggs to adulthood until after I came to the Smithsonian.

Question: Just chance?

Answer: I didn't know enough about them at that time to do the wrong thing!

Question: That's amazing. But there was no one at the university studying crayfish?

Answer: No, no, there was only one person in the United States at the time. The big crayfish men had died: [Walter] Faxon and [Arnold Edward] Ortmann; and Edwin P. Creaser at Michigan Museum [Museum of Zoology, University of Michigan] was the only person working.

That brings me to my first visit to the Smithsonian [Institution] which might be of some interest to you. In 1935, I went up to the Mountain Lake Biological Station for the summer. I had a letter of introduction from my major professor [J. Speed Rogers] at the University of Florida, and one from Dr. Ivey F. Lewis, who was Dean of the University of Virginia, introducing me to Dr. Waldo [L.] Schmitt [then Head Curator

of Zoology at the U. S. National Museum]. So after my stay at the station, I came up to Washington hoping that I might be able to examine the crayfishes. Dr. Schmitt took one look at me . . . I know you wouldn't believe it now, at one time I looked a little young. At the ripe old age of twenty-one I suppose I looked like I was about fifteen. He told me that he would be glad to have me look at the crayfishes, but that I could not open any of the types, couldn't open the bottles. Well I had made that trip at some sacrifice, and Dr. Creaser couldn't identify my material.

Dr. Schmitt was very gracious but not of much help in doing so. Not until 1937, when I convinced Dr. Schmitt that I was a serious worker, did he allow me to come back and examine the type specimens. So I worked for five years on crayfishes not knowing the name of a single crayfish that I was working with!

Question: Oh my goodness! Yes, not having compared them with the ones here.

Answer: I needed to compare them with the types.

Question: Well, you must have come up with some original observations.

Answer: Oh, well, a number of my animals were new. When I started working in Florida I think there'd been about, oh maybe, four species recorded from the state; and when I finished there were forty-two of them.

Question: [Laughter] That's a difference!

Answer: Which labels me perhaps as a splitter.

Question: Yes, but still, there just hadn't been that much work done. There was a paper written by Fenner [A.] Chace [Jr.] at one point about the lack of work in systematics being done in that area during that period [reference to Chace 1951?]. I guess it was not one of the more worked on areas?

Answer: No, it never has been. Crayfishes have never attracted very many people. Those who start, most of them have fallen [by] the wayside after a little bit of work. I've worked on crayfishes I suppose longer

than any other human ever has, in terms of number of years spent.

Question: What was the Smithsonian like when you first came here to work on those?

Answer: Oh, it was a delightful place. Of course, my coming from a small town and coming to Washington, in part, I suppose I was much impressed. Dr. Schmitt was most gracious, as were Mr. [Clarence R.] Shoemaker, Mr. [James O.] Maloney, and Miss [Mary Jane] Rathbun.

Question: She was still here?

Answer: She was still here. I can't remember whether I met her or not, but at least I saw her. And Dr. [Leonhard] Stejneger was a marvel. All of them were most gracious and helpful, and as I said, I do not hold it against Dr. Schmitt at all because I suppose I did look like a high school kid who thought he was going to do something.

Question: Right, take apart all the type specimens.

Answer: With this particular group, the group that's dominant in Florida, unless you look at the first pleopods of the males you can't identify the crayfish at all, and through a bottle you couldn't see them.

Question: Were the collections of crayfish at that point fairly extensive here?

Answer: Well certainly nothing in comparison with what we have at the present time. It was perhaps not even the most important collection in the country. The Museum of Comparative Zoology had many more types than we had at that time; and there were a few at the Philadelphia Academy [of Natural Sciences], but a very important collection existed here, one that formed a nucleus around which we've been building on for a number of years. Now, of course, we have the largest collection of crayfishes in the world—perhaps larger than all the other collections of crayfishes in the world combined [the collection of crayfishes now includes about 25,000 lots and 1500 lots of types].

Question: Was anyone working on them then?

Answer: No, no one at the Smithsonian

had worked on crayfishes. I'm the first person.

Question: Yes, to come in and work on it.

Answer: Faxon worked at the Museum of Comparative Zoology, and Ortmann was at the Carnegie Museum, and Creaser was at the Michigan Museum. Perhaps you know that we have the Michigan collection now. After I came here my major professor became director of the Michigan Museum, and he said, "Nobody's working on crayfishes out here, and we're crowded. Wouldn't the Smithsonian like to have it?" That was just before I came here; I was in Charlottesville at the time. He said, "You're nearby so you can use them from time to time." So we inherited that collection.

Question: How easy was it to start working in a field like that where no one else was working?

Answer: As I look back on it, I had a delightful time all the way through. I knew that I could tell the difference between what I had, and just because I didn't have a name for them at the time didn't bother me too much. The literature had not been cluttered with my group of animals that I was working on in Florida, so there was very little in the literature at all. So there was no great literature problem to face.

Question: Yes, going through the masses of descriptions.

Answer: I hate to say what has been done to it since. [Laughter.] As I frequently say, they will curse me and say all kinds of things, but they can't ignore me any longer with the crayfish.

Question: Right, you have left your mark. Were there avenues, let's say, for publishing your results?

Answer: Oh, they were very limited, of course. Again, I came along during the depression years, but Dr. Schmitt was very, very kind, and I can tell you one lovely little anecdote that happened to me in connection with publications. I used the Proceedings of the Florida Academy of Sci-

ences—it used to be called the Journal. I used that for some of my work. Then the Charleston Museum at that time was publishing a series of Leaflets and Zoologica out of New York, and The American Midland Naturalist [also were available]. So there were a number of places that were open. But I sent one of my early papers up to Dr. Schmitt, describing seven new crayfishes from Florida—I think it was seven new ones—and redescribing, in essence, a species that had already been described. In this I used the word "crawfish." I'd always used crawfish as a name, and throughout most of the South they're still referred to as crawfish. Dr. Schmitt carefully went through my manuscript completely and changed it to crayfish everywhere. So I decided that, well, if they're going to force me to do this (I didn't raise any questions whatsoever), I'll just accept it. So since that time I have used "crayfish," and most of my students do. However, most of the other people, particularly those who've worked in the South, still write crayfishes when they write it.

Question: I hadn't even realized that there was the difference in words.

Answer: Oh yes. And one other thing occurred in that paper. I had caught crayfishes from a cave from which they had been reported in Florida. Faxon had identified the animal as *Cambarus lucifugus* [error for *acherontis* sensu Faxon, not Lönnberg; replaced by *lucifugus* Hobbs (1940a)], a species that had been described by [Einar] Lönnberg in the latter part of the nineteenth century from a well down near Orlando. Well, believing that the written word was infallible, I assumed that the specimens from this cave were what Faxon said they were. This was in the same manuscript, and Dr. Schmitt passed it on up to Dr. Stejneger, who at that time was Head Curator. Dr. Stejneger took one look at it and he said, "What right does he have to say that this is *lucifugus*?" [error for *acherontis* sensu Faxon.] He said, "He should go down to that well and catch some crayfish from that

place to be sure." So Dr. Schmitt wrote back to me and gave me Dr. Stejneger's remarks. Well I was a little bit upset because I thought the possibility of my finding that well that had been dug back in the latter part of the last century was very slight, and Florida was not easy to get around in, it was certainly not like it is now—all highways. But a friend of mine, Lewis J. Marchand, who lived down near Orlando, happened to come by my office within a day or so after I'd heard from Dr. Schmitt. I asked him if he had ever seen any white crayfishes down in that area. He said, "Oh sure, I know a spring where I've seen them a number of times. So I said, "How soon can you be ready to go?" And he said, "Well, tomorrow morning will be fine." So I said, "Well, we'll start then." Palm Springs is what it was. In the meantime, I had another friend, fellow student, at the university who was very good at water goggling—that's what we called it in those days—it's modified scuba diving but you don't have air and so on. Anyway, I asked him if he didn't want to go. This was a cold November day, and, believe you me, Florida can get cold during the winter, the northern part. So we went down to Palm Springs, and when we got to this little spring I looked down—of course it hadn't been used since summer—it was covered with algae, and lying on the algae were white crayfish everywhere. So this friend of mine who went along with us took his gear and jumped off into the spring and time after time he came up, so we got forty-four of those animals that day. I got back to the laboratory, and sure enough, it was not the same as the thing from the cave, and was precisely what Lönnberg had described. So I had to redescribe it and put a new name [*Cambarus lucifugus*] on the material from the cave.

Question: Yes. You can't ever count on . . .

Answer: So Dr. Stejneger sitting in Washington certainly saved me considerable embarrassment, and taught me a good lesson not to accept the printed word.

Question: That is interesting, and you were having things published. Did you start collecting yourself at that point?

Answer: Oh, I started collecting back in 1931, when I was still a freshman.

Question: You did keep track of your different types?

Answer: Oh yes. One of the biggest helps, I suppose, was Dr. [J. Speed] Rogers, my major professor and the chairman of the department at that time, with his meticulousness in keeping notes and insisting that everything be carefully curated. So I started out being trained as a curator, I suppose. Through the years I amassed a collection of some 80,000 specimens that I brought with me when I came to the Smithsonian. All of those were catalogued and we're still using my old numbers. The collection's so tremendous that we haven't been able to incorporate nearly all of them into the Smithsonian catalogue, so we're still using my old cards.

Question: Where did you keep it all?

Answer: In my basement at home.

Question: You did?

Answer: I had a tiny little office at the University of Virginia in an old building. The office was about the size of this little anteroom out here. In one of the rooms the floor fell in, the basement where I had put so many crayfish. I had to take everything out and have the floor reconstructed to support the crayfish collection.

Question: Yes, I guess everything was pretty much alcoholic storage?

Answer: Everything was alcoholic storage, yes.

Question: Which is fairly heavy. The professors you were working under were they systematics people?

Answer: All of them were systematists, for the most part. There were four men in the department at the time, four of the full professors. All of them were graduates of the University of Michigan. One of them had taken his doctorate at, I believe, New York—I'm not sure whether it was Columbia [University] or not—but one of them

had taken his doctorate elsewhere. But all of them had been trained in Michigan under [Alexander G.] Ruthven and [Robert W.] Hegner. Three of them were entomologists: Dr. Rogers worked on the Tipulidae, the crane flies; and Dr. [Theodore Huntington] Hubbell on the Orthoptera, grasshoppers, and Dr. [C. Francis] Byers on the Odonata, dragonflies. The fourth member was a mammalogist. He and I were good cronies because he was interested in bats—primarily, and bats live in caves and crayfish live in caves. So we had a delightful time teaming up going on field trips.

I'll tell you one other story of Dr. [Harley Bakwel] Sherman, the mammalogist. The library at the University of Florida had gotten a new photostat machine and had discarded the old one. Dr. Sherman and I rescued it and rebuilt it. We had heard that there had recently been aerial photographs taken of the area around Gainesville, of the entire county, that were available in the county agent's office. So we borrowed these, and made copies and placed them in our notebooks. Fortunately, those photographs had been taken during the winter months when the deciduous trees had lost their leaves. This meant that where you would see a black spot on our maps this was a cluster of live oak trees, and live oaks usually grow along some depression, frequently indicating a sinkhole or maybe a cave. In Florida, that section of the state is quite flat and the roads are built on the section lines so that they run at mile intervals, almost straight, occasionally going around a sinkhole or something of the sort. But no place are you more than a half a mile from any spot—if you were on the road—from any place within the quadrangle. So we would ride down the section lines with our maps, and if we'd see a black spot, we'd get out of the car and look to see whether this was a cave in which there might be bats or crayfishes or something of the sort.

One afternoon we'd been out, it was getting quite late and there were two graduate students with us, one of them, Dr. [Jerome]

Krivanek, who's now at Vanderbilt [University], and a young man, [William M.] McLane, who has recently died. Dr. Sherman was driving, and I said, "Dr. Sherman, here's a little place right close to the road. Stop, it won't take Billy and me a moment or two to have a look." So we rushed over. It was nothing but a depression, but on our way back to the car there was a perfectly cylindrical chimney that went right down, dropped down, oh, between fifty and seventy feet. I peeked over the edge of it and saw that there was a little water in the bottom of it which excited me, so we rushed back to the car and asked them if we didn't have time to make one quick drop into this hole to see what it was. McLane and I went down into the hole and the other two stayed up above. We got down to the bottom, and I saw white crayfish on the bottom. We looked around and there was a little opening into the side, about two and a half feet in diameter; and we crawled into this opening, and that led into a fissure that was about four feet wide and some sixty or seventy feet long, with no floor, but the entire thing with water under us. It was shallow at one end, then it dropped off rather quickly. Even to this day we don't know how deep it really goes, it just continues on. I saw the white crayfish down there and I turned to this graduate student, and I said, "Billy, if you'll catch one of those crayfishes and it's a new one, I'll name it for you." Well, I knew what they were so I was perfectly safe. So Billy jumped into the water with a dip net and started scurrying around, but he was missing them. I said, "Well, let's go." The water had gotten so cloudy you couldn't do anything. So we crawled back up to the top, and when we reached the top of the cave, he turned to me and said, "Well, Doc, I didn't get any of the big ones but I got this little one." He handed me a vial with a little tiny crawfish [*Troglocambarus maclanei*; in his dedication of this species to McLane, Hobbs (1942b:349, footnote) commented: "It is a pleasure to name this species for Mr.

McLane, who has been a companion on many collecting trips, and who has added numerous valuable specimens to my collection."] in it, the most amazing animal I had ever seen in my life. I couldn't believe that it was anything except a mutant or something had gone wrong somewhere.

We went on back into Gainesville, and I immediately got the binocular scope on it and saw that it was really something out of this world. So the next day I was anxious to get back and get some more of them. Most of the young men who usually went with me were tied up in classes, they couldn't go. I found one man who'd go, and we had gone out to the car; we had our ropes and collecting equipment and so on. About that time I spotted the same man who had caught the crayfish down in Palm Springs, going across the campus. I called to him, and told him that we were going out to a cave, and wouldn't he like to go, and he said no, that he had an organic exam the next day. "Well, that's too bad," I said, "it's a wonderful place to water goggle." I knew that would get him, no question. "Oh?," he said, "All right, I'll go." I called him Jelly, so that gives you some idea as to his size. He wasn't all that obese, he was pretty wide, he had some flesh on him and I was worried all this time about his getting through that side of the pit.

Question: That's true, yes.

Answer: But, we got out to the cave, we went down it, . . . and he said, "Now where's that place to dive?" I said, "It's right through there." He looked at the hole and he said, "I can make it." So into the hole he went, all of us. It was such that we could prop our feet against one wall and lean our back against the other one, no place to stand whatsoever. He said, "Now where's that place to dive?" I said, "You're there." Well, if looks could have killed anyone, well of course, I would have been dead. But he was a good sport so he said, "All right." So he put on his goggles, and he went down, and he came up time after time with this big white crayfish, *Procam-*

barus pallidus, which I had recognized all along—but none of the little fellow. He said, "Well, I've about had it." I said, "Jelly, go down just one more time," and this time when he came up he rotated just before he surfaced and his light beam hit the submerged ceiling, and he saw one of them and picked it off and brought it up. After that, he went down and he got either three or four more that afternoon, all of them collected from the ceiling. So this little animal was highly adapted for living on submerged ceilings of caves; down below it would have been in competition, with a much less chance of survival certainly than it has above, a very small animal. What had happened, of course, McLane, when he jumped into the water, had jarred the water so that the animal became dislodged and on the way down Billy happened to catch it.

Question: Going down without ever looking up.

Answer: I finally caught one when Marchand, the man who had caught so many of them, jumped in one day and another one was dislodged and I saw it come loose and grabbed it with my dip net. That's the only one I've ever caught.

Question: But it was, I guess, a completely new type?

Answer: Oh, it was a completely new genus [*Troglocambarus*]. It is the most fantastic crayfish that we know at the present time. Most crayfishes have teeth on their third maxilliped for chewing. In the first place the maxillipeds have tremendously large and long setae that interlock, and by carrying water through the gill chamber over this setal net, it filters its food out of the water. There is no other crayfish that utilizes this technique.

Question: Fascinating, too, that you did find it. Were there many students in systematics at Florida at that time?

Answer: At that time, ecology was the thing, as it has become in recent years. I was trained as an ecologist; of course, the kind of ecology that we did then had little resemblance to the kind that exists at the

present time. All of us were a combination systematist and ecologist. I was trained in ecology, and the only reason I got into systematics was that I couldn't identify my animals and there was no one to help me, and I had it to do.

Question: Yes, because that had not been done before. So you stayed there until 1946?

Answer: That's right.

Question: And then you moved to the University of Virginia.

Answer: While I was there I came up here many weekends to work in the collection.

Question: You were using these collections?

Answer: Oh, yes, I was using them from the outset. At one time Dr. Schmitt was able to get a little funds to help me to come up and work on weekends. At that time, too, he did another very nice thing for me. Most of the people had to be out of the building by a certain hour, and I was permitted to stay on until midnight. Some way he managed to help me out to that extent, because it was so rare—I could only work on Saturday night. Sometimes I would come up on Friday, I could work Friday night and Saturday night, or on holidays when I came.

Question: I guess you got to know the collections here fairly well. Were they in fairly good condition—identified or catalogued?

Answer: Oh, yes, all of the old material was, and much of the time that I was here, when I would come up on weekends, I was working up collections that had accumulated and identifying them so that they could be catalogued by the time that I came back and they were very nice in sending me duplicate cards for everything that I identified.

Question: Were there many collections coming in during those years, were there expeditions or collecting trips?

Answer: No, not a great many. There had been a considerable backlog because, as I said, no crayfish man had been here since [William Perry] Hay worked at the muse-

um. He also taught high school here in the Washington area, as I understand it. He's one of the few older members—crayfish people—that I met, but he had retired and was quite an old man when I met him. He lived in Florida and made a special trip to come up to Gainesville to see me one time, so I was delighted. He subsequently gave me his library, so I have many of his old notes, things that will go to the archives eventually.

Co-authors of Horton H. Hobbs, Jr.

Hobbs published many papers with co-authors, acknowledging help in the field and collaborating with students and colleagues. Here we list his co-authors and, where possible, their institution (usually as of the dates), to demonstrate the breadth of his association with others with similar interests. As pointed out by Hoffman (1994: 37) some of his papers are co-authored "sometimes for no other reason than to reward the collector of a new species."

- Andolshek, M. D. (1986a). Hobbs's research assistant at the museum. National Museum of Natural History, Smithsonian Institution, Washington, D.C. (see also Margaret A. Daniel).
- Banner, Albert H. (1959d). Hawaii Institute of Marine Biology, University of Hawaii, Kaneohe.
- Barr, Thomas C., Jr. (1960b, 1972b). University of Kentucky, Lexington.
- Bedinger, M. S. (1964b, 1965a). U.S. Geological Survey.
- Bouchard, Raymond W. (1973a, 1976b, 1994). Academy of Natural Sciences of Philadelphia.
- Brown, Arthur V. (1987d). University of Arkansas, Fayetteville.
- Burr, Brooks M. (1984b). Southern Illinois University, Carbondale.
- Carlson, Paul H. (1983c, 1985a). Department of Health and Environmental Control, Columbia, South Carolina.
- Chace, Fenner A., Jr. (1959d, 1969a). National Museum of Natural History, Smithsonian Institution, Washington, D.C.
- Cooper, Martha R. (1972e, 1980c). North Carolina State Museum of Natural History, Raleigh.
- Daniel, Margaret A. (1977c) (nee Margaret D. Andolshek).
- Fitzpatrick, Joseph F., Jr. (1962d, 1970a, 1971d). University of South Alabama, Mobile. Hobbs's last student.

- Franz, Richard (1983a, 1986b, 1991b, 1992). Florida State Museum, University of Florida, Gainesville.
- Freeman, Harry W. (1956d). College of Charleston, South Carolina.
- Grubbs, Andrew G. (1982b, 1986c). Southwest Texas State University.
- Hall, Edward T., Jr. (1969d, 1972f, 1974d). Georgia Water Quality Control Board, Atlanta.
- Hart, C. Willard, Jr. (1956e, 1959b, 1961b, 1966d, 1982e). National Museum of Natural History, Smithsonian Institution, Washington, D.C. One of Hobbs's students.
- Hobbs, Horton H., III (1962a, 1970c, 1973c, 1976e, 1977c, 1989e, 1990b, 1991d, 1995a, 1995b). Hobbs's son, referred to herein as Hobbs III. Wittenberg University, Springfield, Ohio.
- Holt, Perry C. (1967d, 1968b). Virginia Polytechnic Institute, Blacksburg. Hobbs's first student. Fitzpatrick recalls that Holt liked to refer to himself and Fitzpatrick as "alpha and omega."
- Hubricht, Leslie (1959d). Missouri Botanical Garden, St. Louis; Louisville, Kentucky.
- Lee, David S. (1976c). North Carolina State Museum of Natural History, Raleigh.
- Mackin, J. G. (1959d). Texas A&M University, College Station.
- Manning, Raymond B. (1977d). National Museum of Natural History, Smithsonian Institution, Washington, D.C.
- Marchand, Lewis J. (1943a). University of Florida, Gainesville.
- Massmann, William H. (1952b). Virginia Fisheries Laboratory.
- McClure, Auden C. (1983c). McLean, Virginia.
- Means, D. Bruce (1972c). Tall Timbers Research Station, Tallahassee, Florida.
- Page, Charles H. (1953b). Charlottesville, Virginia.
- Parish, Claude E. (1949b). University of Alabama.
- Penn, George Henry, Jr. (1958h). Tulane University, New Orleans, Louisiana.
- Perkins, F. O. (1967c). Virginia Institute of Marine Science, Gloucester Point.
- Peters, Daniel J. (1977b, 1979a, 1982c, 1989b, 1991c, 1993). New Horizons Governor's School for Science and Technology, Hampton, Virginia.
- Pfieger, William L. (1988c). Fish and Wildlife Research Center, Missouri Department of Conservation, Columbia.
- Prins, Rudolph (1972d). Western Kentucky University, Bowling Green.
- Robison, Henry W. (1982d, 1985b, 1988b, 1989f). Southern Arkansas University, Magnolia.
- Rodríguez, Gilberto (1989c, 1989d). Instituto Venezolano de Investigaciones Científicas, Caracas.
- Shoup, C. S. (1942c, 1947b). Vanderbilt University, Nashville, Tennessee.
- Villalobos (Figueroa), Alejandro (1958f, 1964a, 1974b, 1981a). Instituto de Biología, Universidad Nacional Autónoma de México, México.
- Walton sisters, Lucille ("Miss Lucille") and Margaret ("Miss Peggy") (1957b, 1958d, 1959a, 1959c, 1960a, 1960c, 1961a, 1962b, 1963a, 1963b, 1966c, 1966e, 1967d, 1968b, 1968d, 1970b, 1971e, 1975b, 1976d, 1977f). Danville, Virginia and Mountain Lake Biological Station, Pembroke, Virginia. J. F. Fitzpatrick, Jr. (in litt.) notes that "They were—or at least Hobbs thought of them as—the quintessential 'Old Maid Schoolteachers.' Both were older than he, Miss Lucille by a greater margin To the best of my knowledge they met at the Mountain Lake Biological Station where the sisters were summer fixtures. They succumbed to his characteristic charm, and Miss Peggy, "who knew not a thing about crayfishes," took great satisfaction in contributing to science by inking the pencil drawings. This seemed to be her contribution to the joint papers."
- Whiteman, Mike (1987c, 1991a). Texas Agricultural Extension Service, Lufkin.
- Word, Benjamin H. (1958c). University of Virginia, Charlottesville. An undergraduate, now a M.D., who did a research project under Hobbs that was never published. At the time of his death Hobbs was preparing this report for publication; Hobbs III is preparing this final study (see also remarks at end of Hobbs's bibliography).
- Zinn, Donald J. (1948c). University of Rhode Island, Kingston.

Publications of Horton H. Hobbs, Jr.

Here we provide a complete bibliography of Hobbs's publications, in chronological order, annotated with the names of new taxa in each publication. The citations are cross-referenced to the list of taxa named by Hobbs, given below. If the name of a taxon is given in the title, it is not repeated in the list of taxa named in that article.

1937. Some Florida crawfishes and their habitat distribution. [Abstract].—Proceedings of the Florida Academy of Sciences for 1936 1:154.
- 1938a. Two new crawfishes from Florida. *Cambarus hubbelli*, *Cambarus acherontis pallidus*. [Abstract].—Proceedings of the Florida Academy of Sciences 2:90, 91. [Nomina nuda].
- 1938b. A new crawfish from Florida.—Journal of the Washington Academy of Sciences 28(2):61–65. *Cambarus rogersi*.
- 1940a. Seven new crayfishes of the genus *Cambarus* from Florida, with notes on other species.—Proceedings of the United States National Museum 89: 387–423. *C. hubbelli*, *C. kilbyi*, *C. lucifugus alachua*, *C. lucifugus lucifugus*, *C. pallidus*, *C. pictus*, *C. rathbunae*.

- 1940b. A new crayfish from South Carolina.—The Charleston Museum Leaflet 14:3–7. *Cambarus lunzi*.
- 1941a. A new crayfish from San Luis Potosí, México (Decapoda, Astacidae).—*Zoologica*, New York 26(1):1–4. *Cambarus blandingii cuevachicae*.
- 1941b. Three new Florida crayfishes of the subgenus *Cambarus* (Decapoda, Astacidae).—The American Midland Naturalist 26(1):110–121. *C. byersi*, *C. cryptodytes*, *C. floridanus*.
- 1942a. On the first pleopod of the male Cambari (Decapoda, Astacidae).—Proceedings of the Florida Academy of Sciences (for 1940) 5:55–61.
- 1942b. A generic revision of the crayfishes of the subfamily Cambarinae (Decapoda, Astacidae) with the description of a new genus and species.—The American Midland Naturalist 28(2):334–357. *Troglocambarus*, *T. maclanei*.
- 1942c. Hobbs, H. H., Jr., & C. S. Shoup. On the crayfish collected from the Big South Fork of the Cumberland River in Tennessee during the summer of 1938.—The American Midland Naturalist 28(3):634–643.
- 1942d. The crayfishes of Florida.—University of Florida Publication, Biological Science Series 3(2):179 pp., pls. 1 (frontispiece), 2–24. *Cambarellus schmitti*, *Procambarus apalachicola*, *P. bivittatus*, *P. econfinae*, *P. escambiensis*, *P. geodytes*, *P. latipleurum*, *P. leonensis*, *P. okaloosae*, *P. pubischelae*, *P. pycnogonopodus*, *P. pygmaeus*, *P. rogersi campestris*, *P. r. ochlocknensis*, *P. seminolae*, *P. shermani*, *P. youngi*.
- 1943a. Hobbs, H. H., Jr., & L. J. Marchand. A contribution toward a knowledge of the crayfishes of the Reelfoot Lake area.—Journal of the Tennessee Academy of Science 18(1):6–35.
- 1943b. Two new crayfishes from the panhandle of Florida (Decapoda, Astacidae).—Proceedings of the Florida Academy of Sciences 6(1):49–58. Note by Hobbs given in footnote (p. 56): “Due to inadvertent delay in publication of this volume diagnoses of these species [*Procambarus leonensis*, *P. pycnogonopodus*] appeared earlier in ‘The Crayfishes of Florida’ (Hobbs: Univ. Fla. Pub. Biol. Series 3(2):114–115, 117) and thus actually constitute the original descriptions.”
- 1943c. Two new crayfishes of the genus *Procambarus* from Mexico (Decapoda, Astacidae).—*Lloydia* 6:198–206. *P. rodriguezi*, *P. tolteca*.
1944. Notes on the subterranean waters of the Florida Peninsula with particular reference to their crustacean fauna.—The Biologist 26(1&2):6–8.
- 1945a. Notes on the first pleopod of the male Cambarinae (Decapoda, Astacidae).—Quarterly Journal of the Florida Academy of Sciences 8(1):67–70.
- 1945b. The subspecies and intergrades of the Florida burrowing crayfish, *Procambarus rogersi* (Hobbs).—Journal of the Washington Academy of Sciences 35(8):247–260. Note by Hobbs given in footnote (p. 260): “This paper was originally accepted for publication in the Proceedings of the United States National Museum, and it was cited as ‘in press’ in my *Crayfishes of Florida* (Hobbs, 1942). Wartime restrictions, however, so delayed publication by the Museum that the manuscript was withdrawn and submitted to this JOURNAL in order that the full descriptions of the two new subspecies of *Procambarus rogersi* might appear more promptly.”
- 1945c. Two new species of crayfishes of the genus *Cambarellus* from the Gulf coastal states, with a key to the species of the genus (Decapoda, Astacidae).—The American Midland Naturalist 34(2):466–474. *C. diminutus*, *C. puer*.
- 1947a. Two new crayfishes of the genus *Procambarus* from Georgia, with notes on *Procambarus pubescens* (Faxon) (Decapoda, Astacidae).—Quarterly Journal of the Florida Academy of Sciences 9(1):1–18. *P. enoplosternum*, *P. litosternum*.
- 1947b. Hobbs, H. H., Jr., & C. S. Shoup. Two new crayfishes (Decapoda, Astacidae) from the Obey River drainage in Tennessee.—Journal of the Tennessee Academy of Science 22(2):138–145. *Cambarus obeyensis*, *C. parvoculus*.
- 1947c. A key to the crayfishes of the Pictus subgroup of the genus *Procambarus*, with the description of a new species from South Carolina.—The Florida Entomologist 30(3):25–31. *P. lepidodactylus*.
- 1947d. A preliminary report on the crayfishes of Virginia. [Abstract].—Proceedings of the Virginia Academy of Science 1946–1947:72.
- 1948a. On the crayfishes of the *Limosus* section of the genus *Orconectes* (Decapoda: Astacidae).—Journal of the Washington Academy of Sciences 38(1):14–21. *O. shoupi*.
- 1948b. Two new crayfishes of the genus *Orconectes* from Arkansas, with a key to the species of the Hylas group (Decapoda: Astacidae).—The American Midland Naturalist 39(1):139–150. *O. leptogonopodus*, *O. marchandi*.
- 1948c. Hobbs, H. H., Jr., & D. J. Zinn. Crayfish in southern Nevada.—*Science* 107(2780):369.
- 1948d. The crayfish genus *Cambarellus* in the United States. [Abstract].—Proceedings of the Virginia Academy of Science 1948:88.
- 1948e. A new crayfish of the genus *Orconectes* from southern Tennessee (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 61:85–91. *O. wrighti*.
- 1948f. A new crayfish of the genus *Cambarus* from Texas, with notes on the distribution of *Cambarus fodiens* (Cottle).—Proceedings of the United States National Museum 98:223–231. *C. hedgpethi*.
- 1949a. The cave crayfishes of North America. [Abstract].—Journal of the Tennessee Academy of Science 24(3):170.

- 1949b. Hobbs, H. H., Jr., & C. E. Parish. Notes on the life history of a Virginia crayfish. [Abstract].—Proceedings of the Virginia Academy of Science 1948–1949:97.
- 1949c. Observations on the emergence of a stonefly of the genus *Taeniopteryx* in Virginia. [Abstract].—Proceedings of the Virginia Academy of Science 1948–1949:101.
- 1949d. A new crayfish of the genus *Orconectes* from the Nashville Basin in Tennessee, with notes on the range of *Orconectes compressus* (Faxon) (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 62:17–25. *O. rhoadesi*.
- 1950a. A new crayfish of the genus *Cambarellus* from Texas (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 63:89–94. *C. ninae*.
- 1950b. A new crayfish of the genus *Procambarus* from Oklahoma and Arkansas (Decapoda, Astacidae).—Journal of the Washington Academy of Sciences 40(6):194–198. *P. tenuis*.
- 1950c. Observations on the ecological distribution of three Virginia crayfishes. [Abstract].—The Virginia Journal of Science for 1949–1950, new series 1(4): 349.
- 1951a. A new crayfish of the genus *Orconectes* from southeastern Virginia (Decapoda, Astacidae).—The Virginia Journal of Science, new series 2(2):122–128. *O. virginianensis*.
- 1951b. A new crayfish of the genus *Procambarus* from Louisiana, with a key to the species of the Spiculifer group.—Journal of the Washington Academy of Sciences 41(8):272–276. *P. penni*.
- 1952a. A new crayfish from Alabama, with notes on *Procambarus lecontei* (Hagen).—Proceedings of the United States National Museum 102:209–219. *P. verrucosus*.
- 1952b. Hobbs, H. H., Jr., & W. H. Massmann. The river shrimp, *Macrobrachium ohione* (Smith), in Virginia.—The Virginia Journal of Science, new series 3(3):206, 207.
- 1952c. A new crayfish of the genus *Procambarus* from Georgia with a key to the species of the Clarkii subgroup.—Quarterly Journal of the Florida Academy of Sciences 15(3):165–174. *P. howellae*.
- 1952d. A new albinistic crayfish of the genus *Cambarus* from southern Missouri with a key to the albinistic species of the genus (Decapoda, Astacidae).—The American Midland Naturalist 48(3): 689–693. *C. hubrichti*.
- 1952e. A preliminary report on the crayfishes of the Atlantic Slope from New Brunswick to South Carolina. [Abstract].—The Virginia Journal of Science, new series 3(4):295.
- 1953a. Two new crayfishes from the Highland Rim in Tennessee (Decapoda, Astacidae).—Journal of the Tennessee Academy of Science 28(1):20–27 [also published in Report of the Reelfoot Lake Biological Station, vol. 17, 1953]. *Cambarus brachydactylus*, *C. friaufi*.
- 1953b. Hobbs, H. H., Jr., & C. H. Page. Additional records of the occurrence of the freshwater jellyfish, *Craspedacusta sowerbii*, in Virginia.—The Virginia Journal of Science, new series 4(3):137.
- 1953c. The epizootic associates of the crayfishes of the New River system with particular reference to the ostracods. [Abstract].—Journal of the Tennessee Academy of Science 28(3):180, 181.
- 1953d. A new crayfish of the genus *Procambarus* from Alabama and Florida (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 66:173–178. *P. suttkusi*.
- 1953e. On the ranges of certain crayfishes of the Spiculifer group of the genus *Procambarus*, with the description of a new species (Decapoda: Astacidae).—Journal of the Washington Academy of Sciences 43(12):412–417. *P. raneyi*.
- 1954a. Apparent competition between two groups of crayfishes in the southeastern states. [Abstract].—The Virginia Journal of Science, new series 4(4): 230.
- 1954b. A new crayfish from the upper coastal plain of Georgia (Decapoda, Astacidae).—Quarterly Journal of the Florida Academy of Sciences 17(2):110–118. *Procambarus truculentus*.
- 1954c. A redescription of *Procambarus ruthveni* (Pearse) from La Laja Creek at Cuatratotolapam, Veracruz, Mexico (Decapoda, Astacidae).—Occasional Papers of the Museum of Zoology, University of Michigan 559:1–5.
- 1954d. Studies on the geographic distribution of the crayfishes of the genus *Procambarus*. [Abstract].—Journal of the Tennessee Academy of Science 29(3): 181.
- 1954e. Notes on the evolution of the Longulus group of the crayfish genus *Cambarus*. [Abstract].—The Virginia Journal of Science, new series 5(4):261.
- 1955a. A new crayfish of the genus *Cambarus* from Mississippi.—Proceedings of the Biological Society of Washington 65:95–100. *C. cristatus*.
- 1955b. Ostracods of the genus *Entocythere* from the New River system in North Carolina, Virginia, and West Virginia.—Transactions of the American Microscopical Society 74(4):325–333. *E. daphnioides*, *E. runki*.
- 1955c. A tendency towards cyclic dimorphism in female crayfishes. [Abstract].—The Virginia Journal of Science, new series 6(4):248.
- 1955d. Two crayfish highways to Florida. [Abstract].—Association of Southeastern Biologists Bulletin 2(1):7.
- 1956a. A new crayfish of the genus *Cambarus* from North Carolina and South Carolina (Decapoda, Astacidae).—Journal of the Elisha Mitchell Scientific Society 72(1):61–67. *C. reduuncus*.
- 1956b. A new crayfish of the Extranous section of the

- genus *Cambarus* with a key to the species of the section (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 69:115–121. *C. spicatus*.
- 1956c. A new crayfish of the genus *Procambarus* from South Carolina (Decapoda: Astacidae).—Journal of the Washington Academy of Sciences 46(4):117–121. *P. echinatus*.
- 1956d. Hobbs, H. H., Jr., & H. W. Freeman. The decapod crustaceans of the Wateree River system in North Carolina and South Carolina. [Abstract].—Association of Southeastern Biologists Bulletin 3(1):10.
- 1956e. Hart, C. W., & H. H. Hobbs, Jr. The crayfish of the Lower Flint-Chattahoochee River system. [Abstract].—The Virginia Journal of Science, new series 7(4):292.
- 1957a. Observaciones acerca de las especies del género *Entocythere* (Crustaceos, Ostracodos) de Cuba.—Anales del Instituto de Biología, Universidad Nacional Autónoma de México 27(2):431–436. *E. hamata*.
- 1957b. Hobbs, H. H., Jr., & M. Walton. Three new crayfishes from Alabama and Mississippi (Decapoda: Astacidae).—Tulane Studies in Zoology 5(3):39–52. *Procambarus hybus*, *P. jaculus*, *P. mancus*.
- 1958a. The evolutionary history of the Pictus group of the crayfish genus *Procambarus* (Decapoda, Astacidae).—Quarterly Journal of the Florida Academy of Sciences 2(1):71–91.
- 1958b. Two new crayfishes of the genus *Procambarus* from South Carolina.—Journal of the Washington Academy of Sciences 48(5):160–168. *P. ancylus*, *P. hirsutus*.
- 1958c. Two new crayfishes of the genus *Procambarus* from South Carolina and Georgia.—Notulae Naturae, Academy of Natural Sciences of Philadelphia 307:1–10, pls. 1, 2. *P. chacei*, *P. epicyrtus*.
- 1958d. Hobbs, H. H., Jr., & M. Walton. *Procambarus pearsei plumimanus*, a new crayfish from North Carolina (Decapoda, Astacidae).—Journal of The Elisha Mitchell Scientific Society 74(1):7–12.
- 1958e. Word, B. H., & H. H. Hobbs, Jr. Observations on the testis of the crayfish *Cambarus montanus acuminatus* Faxon.—Transactions of the American Microscopical Society 77(4):435–450.
- 1958f. Hobbs, H. H., Jr., & A. Villalobos. The exoskeleton of a freshwater crab as a microhabitat for several invertebrates. [Abstract].—The Virginia Journal of Science, new series 9(4):395, 396.
- 1958g. General Zoology. Tracey I. Storer & Robert L. Usinger. [Book review].—American Institute of Biological Sciences Bulletin 8:43.
- 1958h. Penn, G. H., & H. H. Hobbs, Jr. A contribution toward a knowledge of the crawfishes of Texas (Decapoda, Astacidae).—The Texas Journal of Science 10(4):452–483.
- 1959a. Hobbs, H. H., Jr., & M. Walton. A new crayfish of the genus *Procambarus* from Alabama (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 72:39–44. *P. lewisi*.
- 1959b. Hobbs, H. H., Jr., & C. W. Hart, Jr. The freshwater decapod crustaceans of the Apalachicola drainage system in Florida, Southern Alabama, and Georgia.—Bulletin of the Florida State Museum, Biological Series 4(5):145–191. *Procambarus rogersi expletus*.
- 1959c. Walton, M., & H. H. Hobbs, Jr. Two new eyeless ostracods of the genus *Entocythere* from Florida.—The Quarterly Journal of the Florida Academy of Sciences 22(2):114–120. *E. ambophora*, *E. lucifuga*.
- 1959d. Hobbs, H. H., Jr., F. A. Chace, Jr., J. G. Mackin, L. Hubricht, & A. H. Banner. Malacostraca. Pp. 889–901 in H. B. Ward & G. C. Whipple (W. T. Edmondson, editor), Freshwater Biology, 2nd edition, Wiley, New York, 1248 pp. [crayfishes, pp. 882–898].
- 1960a. Hobbs, H. H., Jr., & M. Walton. Three new ostracods of the genus *Entocythere* from the Hiwassee drainage system in Georgia and Tennessee.—Journal of the Tennessee Academy of Science 35(1):17–23. *E. cyma*, *E. mecoscapha*, *E. simondsi*.
- 1960b. Hobbs, H. H., Jr., & T. C. Barr, Jr. The genus *Cambarus*. The origins and affinities of the troglobitic crayfishes of North America (Decapoda, Astacidae), I.—The American Midland Naturalist 64(1):12–33. *C. jonesi*.
- 1960c. Hobbs, H. H., Jr., & M. Walton. A new crayfish of the genus *Procambarus* from southern Alabama (Decapoda, Astacidae).—Proceedings of the Biological Society of Washington 73:123–129. *P. lophotus*.
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- At the time of his death, Hobbs was completing a manuscript entitled “A comparative study of functional morphology of the male reproductive systems in the Astacidea (Crustacea: Decapoda) with emphasis on the freshwater crayfishes.” Hobbs III plans to complete preparing this manuscript for publication.
- Taxa Named by Horton H. Hobbs, Jr.
- The family, genera and subgenera, species and subspecies named by Hobbs and colleagues are listed alphabetically and are cross-referenced to Hobbs’s bibliography, above. We provide the repository and catalogue number for all holotypes of species and subspecies. Most of the holotypes of taxa named by Hobbs are in the collections of the National Museum of Natural History, Smithsonian Institution, Washington (USNM). One holotype is in The Natural History Museum, London (BMNH) and several are in the Muséum National d’Histoire Naturelle, Paris (MNHN) as well as The Academy of Natural Sciences of Philadelphia (ANSP). When a holotype has been deposited in a museum other than the USNM, catalogue numbers of USNM paratypes are provided.
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